JETRM International Journal of Engineering Technology Research & Management Published By: <u>https://www.ijetrm.com/</u>

IMPACT OF CENTRALIZED EDUCATIONAL SUPPORT PLATFORMS ON REDUCING DROPOUT RATES

Mrs Trupti Firake (Project Guide)

Assistant Professor, Department of Information Technology, D.Y. Patil College of Engineering Swati

Aditi Sakharkar Supriya Jathar Harshada Nikam

UG Student, Department of Information Technology, D.Y. Patil College of Engineering, Pune, India

ABSTRACT

This research paper explores the role of centralized educational support platforms in reducing dropout rates, with a focus on **Shiksha-Setu**, a platform designed to assist dropout students in India. By consolidating resources such as government schemes, NGO support, and sponsorship opportunities, **Shiksha-Setu** creates a streamlined process for dropouts to access educational and career-related resources, helping them overcome barriers to re-engagement. Through a detailed analysis of user engagement, platform interaction data, and feedback from stakeholders, this study investigates how centralized platforms foster re-enrollment, bridge resource gaps, and improve educational outcomes. The insights from this research underscore the platform's role in reducing dropout rates and present a model for future educational support initiatives aimed at mitigating the dropout crisis and addressing the socioeconomic disadvantages faced by students who leave the education system prematurely.

Keywords:

Educational Support Platform, Dropout Reduction, Student Retention, Centralized Resources, Re-engagement, Shiksha-Setu, Socioeconomic Barriers, Educational Continuity

INTRODUCTION

High dropout rates in educational institutions remain a significant issue, affecting not only individual students but also the broader socioeconomic fabric. Dropouts often face a lack of structured pathways to re-enter education or transition to alternative career opportunities, which can limit their future prospects. Addressing this issue requires a targeted approach that connects dropouts with support systems, enabling them to pursue educational continuity or vocational paths that match their circumstances. The **Shiksha-Setu** platform aims to fill this gap by offering a centralized resource for dropouts, bringing together various support initiatives, schemes, and sponsorships within a single digital space.

This study examines the impact of **Shiksha-Setu** in providing a solution that simplifies access to educational support resources. It seeks to determine whether such platforms can effectively encourage students to re-engage with their education and career development, thereby reducing dropout rates. By analyzing user data, engagement patterns, and feedback from key stakeholders—including students, NGOs, and government agencies—this research highlights the importance of centralized platforms in addressing dropout challenges. Furthermore, the study offers insights into how educational institutions and policymakers can leverage digital tools to create a more inclusive support ecosystem for students.

OBJECTIVES

The objectives of this study are centered on evaluating the potential of centralized educational support platforms, like **Shiksha-Setu**, to reduce dropout rates by addressing the unique needs of dropout students. Specifically, the study aims to:

1. Assess Accessibility and Engagement: Analyze how Shiksha-Setu provides accessible, streamlined resources that support dropout students in exploring re-engagement opportunities. The objective is to

JETRM

International Journal of Engineering Technology Research & Management

Published By:

https://www.ijetrm.com/

understand if the platform's easy-to-navigate interface and resource consolidation lead to higher rates of student retention and engagement.

- 2. Enable Cross-Sector Collaboration: Evaluate how the platform facilitates collaboration between government agencies and NGOs in delivering coordinated support, allowing for efficient distribution of educational and career resources to those most in need. This objective includes assessing the effectiveness of such partnerships in enhancing support accessibility and quality.
- 3. Inform Policy Development through Data Insights: Use platform analytics to identify trends in student dropout patterns and barriers to re-engagement. This includes examining factors such as socioeconomic status, geographic location, and educational background, providing data-driven recommendations to help shape policy and intervention strategies that target the root causes of dropout.

METHODOLOGY

This study uses a mixed-method approach to evaluate the **Shiksha-Setu** platform's impact. By combining quantitative data from platform usage metrics with qualitative feedback from user surveys and interviews, the study provides a comprehensive analysis of the platform's effectiveness in supporting dropout students. The methodology includes:

1. Data Collection:

1.1 User Surveys: Surveys were administered to dropout students utilizing the platform, capturing feedback on ease of use, accessibility, and their perceptions of the platform's impact on their likelihood to reengage with education or career pathways.

1.2 Interviews with Stakeholders: In-depth interviews were conducted with government officials and NGO representatives involved in the platform, exploring their experiences and observations regarding its effectiveness in delivering support to dropout students.

1.3 Platform Analytics: The study utilizes engagement metrics from **Shiksha-Setu**, such as user logins, resource views, and scheme applications, to quantify the platform's reach and effectiveness. These data points help illustrate trends in student re-engagement and the specific types of support resources that are most frequently accessed.

2. Comparative Analysis: To measure the impact of Shiksha-Setu, a comparative analysis was conducted on dropout rates and student engagement in regions with access to the platform versus those without. This analysis helps isolate the platform's influence by comparing changes in re-enrollment and retention rates.

3. Data Analysis: Quantitative data was analyzed using statistical techniques to identify significant changes in dropout rates, while qualitative feedback from surveys and interviews was thematically analyzed to uncover common themes related to user satisfaction, perceived barriers, and areas for improvement.

The system consists of two primary user roles: **students** and **admin/government bodies**. The architecture revolves around the core system, which manages document verification, schemes management, and student interaction through various modules. The Portal employs a modular approach to streamline various functionalities such as student registration, document verification, scheme browsing, sponsorship, and data analysis. Each module works in a sequential and independent manner, ensuring seamless integration and efficient user interaction.

JETRM International Journal of Engineering Technology Research & Management Published By: https://www.ijetrm.com/



Fig 1 Proposed System Architecture

	SHIKSHA SETU - Student Portal						*
					Add New Scheme		and the
	search scheme	۹ 💧					
	✓ All Schemes	Requests		· Bi	A Scheme Name eligibility	1	1
	Scheme 2 Student name	Approve Reject		2			
	Scheme 2 Student name	×	E		Scheme name download GR Scheme Details		
		Approve Reject		P.	Delete Add N	ew Scheme	
	✓ 10th dropout 12th drop 12th drop	Dout University dropout others			✓ Add Update	Delete	DR

Fig 2 Propsed Graphical User Interface (Figma Representation)

JETRM

International Journal of Engineering Technology Research & Management

Published By:

https://www.ijetrm.com/

RESULTS AND DISCUSSION

The *Shiksha-Setu* platform has demonstrated positive outcomes in initial evaluations, with notable improvements in student re-engagement and retention. Key findings include:

- 1. **Increased Student Re-engagement**: The platform facilitated a significant increase in re-engagement among dropout students, with many expressing renewed interest in education due to easy access to resources.
- 2. Enhanced Support Collaboration: Government agencies and NGOs involved in the program reported improved efficiency in reaching and assisting dropout students through the centralized platform, allowing for more streamlined and effective support.
- 3. **Data-Driven Insights for Policy Making**: The analytics module revealed critical dropout patterns related to socioeconomic status and location, providing valuable insights for policymakers to create targeted interventions.

ACKNOWLEDGEMENT

We express our sincere gratitude to our guide, Mrs. Trupti Firake, for her invaluable support and guidance throughout this project. We extend our heartfelt thanks to Dr. Preeti Patil, Head of the Department of Information Technology at D.Y. Patil College of Engineering, Pune, for her encouragement and insightful feedback. We are also grateful to all the faculty and staff members of the Information Technology Department for their assistance and cooperation. Finally, we thank our families and friends for their constant support and motivation throughout this journey.

CONCLUSION

The **Shiksha-Setu** platform has shown promise as an effective centralized educational support system, helping address dropout challenges by streamlining access to essential resources. By providing an accessible and secure platform, **Shiksha-Setu** helps students reconnect with educational opportunities, enhances collaboration among support agencies, and offers data-driven insights to inform dropout prevention policies. This research supports the use of centralized platforms as a viable solution for reducing dropout rates and empowering students to pursue a sustainable educational path.

REFERENCES

[1] V. Hegde and P. P. Prageeth, "Higher Education Student Dropout Prediction and Analysis through Educational Data Mining," *2018 International Conference on Inventive Research in Computing Applications (ICIRCA)*, Coimbatore, India, 2018, pp. 1246-1251, doi: 10.1109/ICIRCA.2018.8398887.

[2] L. Aulck, "Predicting Student Dropout in Higher Education," *DataLab, The Information School, University of Washington*, arXiv:1606.06364 [cs.ED], 2016. [Online]. Available: <u>https://arxiv.org/pdf/1606.06364</u>

[3] "State and District Strategies to Reduce Dropouts," Institute of Education Sciences, [Online]. Available: https://ies.ed.gov/ncee/edlabs/regions/midwest/pdf/REL_2014202.pdf. [Accessed: Oct. 9, 2024].

[4] Persona Blog, "Document Verification: Understanding the Whole Process," *Persona*, 2023. [Online]. Available: <u>https://withpersona.com/blog/document-verification-understanding-the-whole-process</u>

[5] Extramarks Blog, "How to Prevent School Dropouts in India," *Extramarks*, 2023. [Online]. Available: <u>https://www.extramarks.com/blogs/how-to-prevent-school-dropouts-in-india/</u>

[6] A. Sng, "Indian Student State-Wise Dropout Rate Dataset," *Kaggle*, 2021. [Online]. Available: <u>https://www.kaggle.com/datasets/adarshsng/indian-student-state-wise-dropout-rate-dor</u>